New Hampshire Asthma Plan

Meeting the Challenge of Asthma in New Hampshire

New Hampshire Department of Health and Human Services
Division of Public Health Services
Bureau of Prevention Services
Asthma Control Program

New Hampshire Asthma Plan

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I. Executive Summary

New Hampshire, along with the five other New England states, has among the highest rates of asthma in the nation. According to 2002 Behavioral Risk Factor Surveillance System data, adult current asthma prevalence rates range from a low of 5.8% in South Carolina to a high of 10% in Maine and 11.5% in the territory of Puerto Rico. The New Hampshire rate for adult current asthma is 8.7%.[1]

The Centers for Disease Control and Prevention funds approximately half the states in the country, including New Hampshire, to develop statewide plans and programs to address asthma from a public health perspective. With a three-year planning grant, the New Hampshire Asthma Control Program was charged with establishing a surveillance system for asthma and developing a comprehensive asthma plan for the State.

Many dedicated and committed individuals and institutions are currently involved in a range of efforts aimed at solving some part of the challenge presented by asthma and improving the health status and quality of life of people in New Hampshire with asthma. Though not exhaustive, the following list reveals the breadth and depth of activities across the state.

- Federally funded community health centers that are part of the Community Health Access Network have focused on asthma as they work to institutionalize chronic disease care models and the use of the electronic medical record.
- Hospitals are investing in asthma education and strengthening the delivery of asthma care from emergency rooms to primary care providers.
- Individual and group physician practices have taken steps to adhere to national guidelines and improve patient education and self-management.
- In 2001, the Environmental Protection Agency recognized Little Harbour School in Portsmouth and the Nashua School District with Indoor Air Quality Tools for Schools Excellence Awards, and a collaborative working group of stakeholders has helped bring Tools for Schools to schools in other districts.
- The New Hampshire Department of Education is working with school nurses to track child health status, and the Manchester Health Department is piloting a school health surveillance project.
- The American Lung Association of New Hampshire works successfully with schools around the state to educate staff and students with programs such as Open Airways, Blowing Away Asthma, and the AsthmaBusters website for teens.
- The New Hampshire Department of Environmental Services has launched award-winning school bus anti-idling and diesel retrofit initiatives.
- Researchers at the University of New Hampshire Climate Change Research Center are investigating the links between air quality and asthma in Maine, New Hampshire, and Vermont.

"The school nurse at my daughter's school has been a wonderful resource – with teachers and coaches, for my daughter as a point of contact, for me. The consistency she's provided has really helped."
-Parent

The New Hampshire Asthma Plan provides a conceptual framework for addressing asthma in New Hampshire. It is the result of an extensive planning process carried out by the New Hampshire Asthma Advisory Council and its subcommittees and facilitated by the NH Asthma Control Program with the help of an external consultant.

Section II of this document provides a brief overview of the planning process the advisory council used to pull together statistical data, trend and resource analyses, focus group findings, stakeholder recommendations, and information on "best practices" to identify priority areas for intervention and make recommendations for action.

Section III describes the asthma challenge for the nation and for New Hampshire, referencing national data, information from the Asthma Control Program's surveillance reports, and findings from focus groups held around the state.

Section IV covers background information, goals, objectives, and action steps recommended for four intervention areas: Clinical Services and Disease Management, Indoor and Outdoor Environments, Public Awareness, and Asthma Surveillance.

Sections V-VI complete the document with references and a bibliography.

As can be seen in the Acknowledgments pages, people from around the state with a wide range of backgrounds and expertise have had input into this plan. Hopefully they will continue to participate in the process started here and others will join them, because this is just the beginning of coordinated efforts to address asthma in New Hampshire.

Importantly, the New Hampshire Asthma Plan is not a directive for the Division of Public Health Services (DPHS), NH Department of Health and Human Services, though there are many things in it that DPHS will be able to respond to as one of the partners in this process. Rather, it's an invitation to everyone in the state with an interest in asthma - public health workers and health care providers, professional associations, coalitions, parent networks, researchers, and others - to focus their energy and resources on areas that will have the most impact, and to coordinate and integrate their planning and programming as much as possible to maximize benefit.

II. Planning Process for New Hampshire's Asthma Plan

The planning process for the New Hampshire Asthma Plan began in January 2003 under a contract with an external consultant. By engaging in a statewide planning process, we hoped to enhance communication and networking among partners and stakeholders, and produce a plan that responded not only to national and regional goals, but also to the data we now have on asthma in New Hampshire and the experiences and observations of professionals and the public around the state.

The New Hampshire Asthma Advisory Council

The first step in the planning process was to form a statewide advisory group, the New Hampshire Asthma Advisory Council, to represent different interests in asthma around New Hampshire and guide the development of the plan. Participants were recruited from among the health plans operating in the state, public and private health providers, public health, environmental services, education, housing, and professional associations.

The council's first tasks were to reach agreement on overall objectives for the planning process and select methods for the process that would engage as many stakeholders as possible with the resources available. The council organized itself into three subcommittees: clinical services and disease management, environment, and surveillance. Over the following months, the sub-committees reviewed information from surveillance reports, focus group findings, recommendations from health care providers, and the literature. They completed exercises designed to describe the environment in which asthma exists in New Hampshire and develop relevant recommendations for their particular focus area.

Analyses Describing State Trends and Resources

Each subcommittee performed a trend analysis for their respective area of focus, identifying key demographic, political, economic, and technological trends that affect the control of asthma in New Hampshire. They then created an inventory of current resources and activities around the state, listing the strengths, opportunities, and barriers to change. This environmental analysis supplied the framework for developing the objectives and action steps that would later go into the asthma plan.

Asthma in New Hampshire Data Report

The May 2003 release of the Asthma Control Program's first surveillance report, *Asthma in New Hampshire, 1990-2001*, detailed currently available information on the burden of asthma in the state and prompted the advisory council to identify questions that future surveillance reports may be able to address. Information from the 2003 report and subsequent updates appears in later sections of this document.

Focus Groups

The Asthma Control Program conducted focus groups in seven towns around New Hampshire: Portsmouth, Nashua, Manchester, Laconia, Littleton, Berlin, and Keene. These sessions included individuals with asthma, family members, physicians, nurses, respiratory therapists, school nurses, local public health practitioners, community members, and businesses, and were held in collaboration with the Dartmouth-based Hood Center Partners in Health Program, which provides family-centered health care for families and children with chronic illnesses,

The focus groups made it possible for people in communities around the state to register their views on what works and what does not work with regard to asthma care and management in New Hampshire. The findings helped document the impact of asthma in the state, corroborating anecdotal information shared at advisory council meetings and helping to inform the work of the advisory council subcommittees as they approached setting priorities and making recommendations. By bringing community people together to discuss issues surrounding asthma, the focus groups also helped increase awareness of local and state concerns and build relationships between stakeholders.

Asthma Control Program focus group locations.

Priorities and Recommendations

By July 2003, the advisory council had drafted four sets of recommendations covering clinical services and disease management, indoor and outdoor environments, surveillance, and public awareness. Public awareness had not originally been treated as a separate focus area, but because common issues relating to public information and awareness emerged in each of the subcommittees, the advisory council decided to create a separate set of recommendations for this area. After cross-referencing to national, regional, and state plans to check for comprehensiveness, the council created an over-arching goal statement and series of objectives for each focus area and narrowed the recommendations into a list of five to ten key action steps. The final set of recommendations appears in Section IV.

From the start, the advisory council realized that time constraints would make it difficult to engage clinical providers in regular planning meetings. To ensure their critical input, the program convened a specially designed provider summit that was attended by over seventy physicians, respiratory therapists, asthma educators, hospital and group practice nurses, and health plan representatives. Small facilitated groups worked through a series of questions and developed recommendations that were incorporated into the draft asthma plan.

Feedback and Evaluation

The advisory council has received continuous feedback from outside experts and members of the management team for the Department of Public Health Services, NH Department of Health and Human Services. Ongoing evaluation of the planning process by the advisory council describes a positive experience that was well organized, efficient, productive, and effective. Furthermore, it is felt that stakeholder networking and relationships have strengthened as a result of this process.

III. The Asthma Challenge

A. The Asthma Challenge for the Nation

"Much of what is known about controlling asthma is not being applied." This quote, attributed to Julie Louise Gerberding, MD, MPH, Director of the Centers for Disease Control and Prevention (CDC), accurately introduces the challenge taken on by the CDC and the state asthma programs it funds.

"Asthma is under-diagnosed and under-treated everywhere. Every physician has multiple copies of the national guidelines in their office, but too often our practice doesn't match the standard of care."

-Physician

The asthma basics are generally well-accepted:

- It is the most common chronic disease among children, causing episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning coughing.
- It is still not known what causes asthma to develop, though we know that people with a family history of asthma are more susceptible to developing the disease, and allergies, illness, and environmental exposures can all be important contributors to asthma attacks and an increase in asthma symptoms.
- There is no known cure for asthma, but it can be successfully controlled by following a medical management plan and avoiding exposure to environmental triggers.
- People with asthma can be symptom free and lead healthy, active lives.

While national surveillance data show that mortality and hospitalization rates due to asthma are leveling off, the burden of asthma is still substantial. In 2002, an estimated 7.5% of adults in the U.S., approximately 16 million people, had a current diagnosis of asthma.[2]

Costs associated with asthma bear out Dr. Gerberding's assessment. Though asthma can be effectively controlled, in 2002 it accounted for an estimated $9.4 billion in direct health care costs and $4.6 billion in indirect costs such as lost work and school days due to illness.[3] Severe asthma disproportionately affects poor, minority, and urban populations.

The U.S. Department of Health and Human Services Healthy People 2010 asthma objectives respond to these data and the broad impact asthma has on individual lives and the nation's health. The objectives seek to establish surveillance systems in at least half the states; reduce emergency department visits, hospitalizations, and mortality due to asthma; reduce activity limitations and number of school or work days missed due to asthma; and increase the proportion of people with asthma who receive formal patient education and appropriate care according to National Asthma Education and Prevention Program (NAEPP) Guidelines.

The CDC's National Asthma Control Program, established in 1999, focuses on three strategies to achieve the national Healthy People 2010 objectives: asthma tracking to collect and analyze data to accurately describe the disease, the implementation of evidence-based interventions to improve public health practice and programming, and the establishment of partnerships to concentrate action and resources for responding to the public health challenges presented by asthma.

B. The Asthma Challenge in New Hampshire

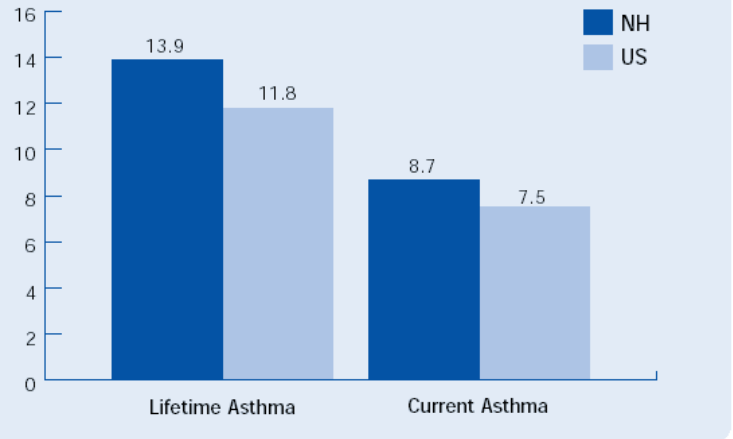
New Hampshire data:

The profile of asthma in New Hampshire suggests that the burden of disease and its impact are following national trends. The NH Asthma Control Program released its first asthma surveillance report, Asthma in New Hampshire, 1990-2001, in May 2003. The report features data analyses from sources currently available through the NH Bureau of Health Statistics and Data Management: asthma prevalence data from the Behavioral Risk Factor Surveillance System (BRFSS), hospitalization and emergency department data from the hospital inpatient and outpatient discharge data sets, and mortality data from vital statistics. The New Hampshire data reported below are from the most recent updates of these data sources.[4]

Prevalence data

Among adults in New Hampshire, asthma affects proportionally more women than men. According to 2002 BRFSS data, approximately 14% of New Hampshire adults, or 133,000, were told that they had asthma at some time in their life, and 8.7%, or 83,000, had a current diagnosis of asthma. [Figure 1] The prevalence of current asthma was significantly higher among adult women (10.9%) than among adult men (6.4%). BRFSS data from 2001 reveal that an estimated 11% of New Hampshire children under 18 years of age, or 35,000, have been told they had asthma at some time in their life, and 8%, or approximately 23,000, had current asthma.[5]

Figure 1. Lifetime and Current Asthma Prevalence Among Adults - New Hampshire and U.S., 2002



"I was diagnosed with asthma in my forties, and now, after years of not having any problems, it's kicking up again. I don't know how I'm going to handle the more than $400 per month of out-of-pocket expenses I have for medications every month."

- Patient

"When my kids were smaller, I never liked the idea of their being on medication everyday. It made them jumpy. So I didn't do it."

-Parent

"How many people who end up in the emergency room get asthma education or a referral for follow-up with a primary care physician?"

-Asthma Educator

Emergency Department Visits

There were over 6,000 asthma-related emergency department visits in New Hampshire each year from 1996-2001. The rate of emergency department visits for asthma in 2001 was approximately 50 visits for every 10,000 residents. Children less than five years of age and adults aged 15-34 had the highest rates of emergency department visits with 67/10,000 and 73/10,000 respectively. Females had higher rates of asthma-related emergency department visits than males: 57 per 10,000 compared to 41 per 10,000 for males. This gender difference is also seen in national data and has been consistent in New Hampshire over time, with rates for females approximately 30% higher than for males from 1996-2001. [Figures 2,3]

Figure 2. Emergency Department Visits for Asthma, by Age Group - New Hampshire, 1996-2001

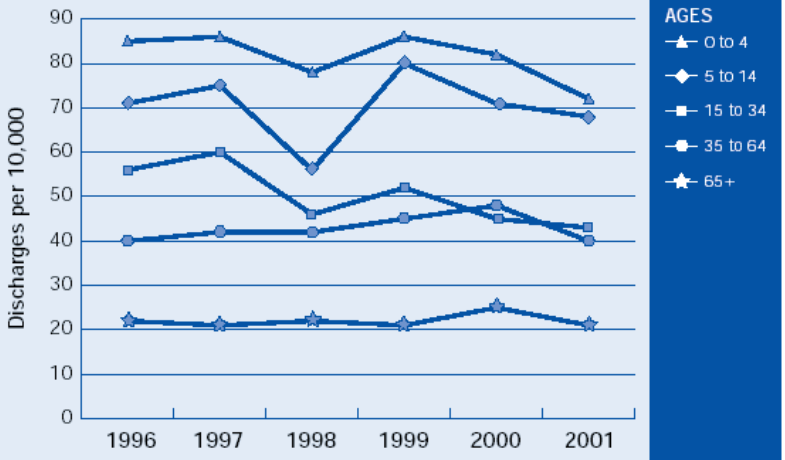
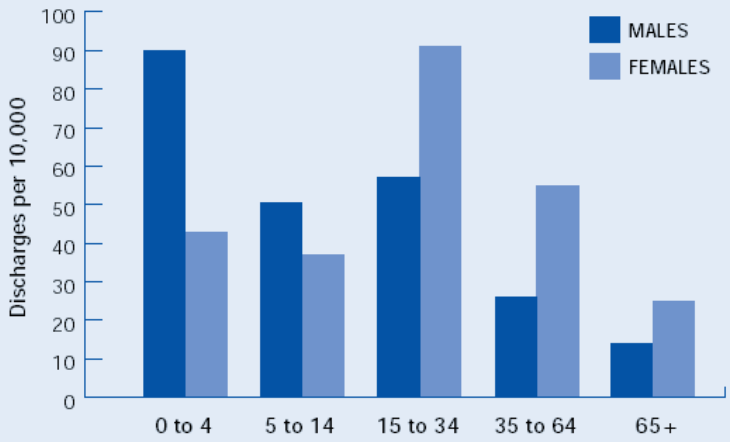


Figure 3. Rate of Emergency Department Discharges for Asthma, by Age Group and Sex - New Hampshire, 2001



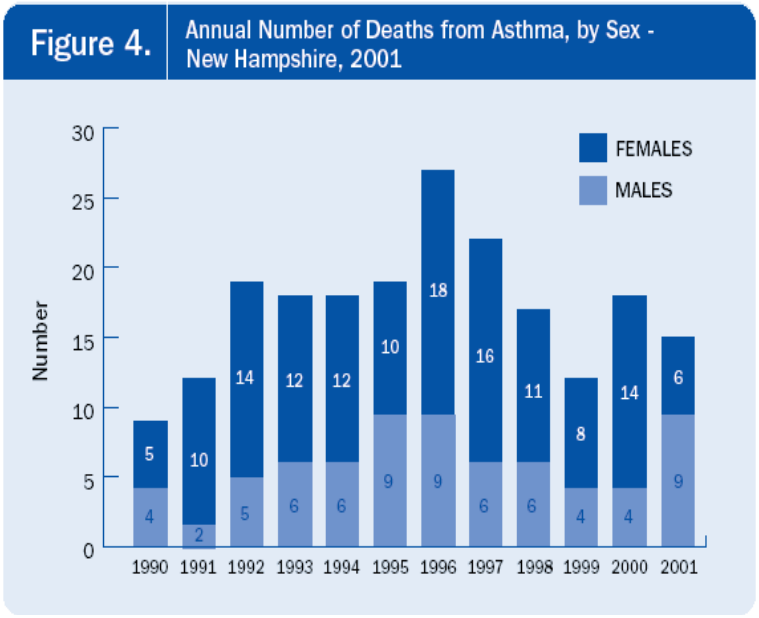
Inpatient Hospitalizations

There were 752 hospitalizations for asthma in 2001 – a rate of 6 hospitalizations for every 10,000 residents. These hospitalizations resulted in 2,412 days spent in the hospital and an average length of stay of 3.2 days. Women, children less than 5 years of age, and adults 65 and older had the highest rates of hospitalization for asthma in 2001.

Mortality

Deaths from asthma are relatively uncommon, especially among young people. There were a total of 206 asthma-related deaths among New Hampshire residents over the period 1990-2001. Approximately two-thirds of these deaths were among women and 61% were among adults aged 65 years and older. There were 15 deaths from asthma in New Hampshire in the year 2001. [Figure 4]

Figure 4. Annual Number of Deaths from Asthma, by Sex - New Hampshire, 2001



"I live in the North Country and had to drive an hour and a half one way to bring my 4 year old to a specialist to be diagnosed."
-Parent

"Two of my children have asthma, and I do too. Even with health insurance, we struggle with out-of-pocket expenses every month."
-Parent

Direct and Indirect Costs

In 1998, the total cost of asthma in New Hampshire, including direct and indirect costs, was an estimated 46 million dollars.

Direct costs of asthma include charges for inpatient and emergency department services and related physician services and medications. In 2001, inpatient hospitalizations for asthma resulted in 4.2 million dollars in total charges. Private insurers were the primary payor for 39% of all asthma hospitalizations; Medicare accounted for 36%, Medicaid for 13%, and self-pay for 11%. Asthma-related emergency department visits resulted in 2.9 million dollars of charges in 2001. Approximately 55% of charges were paid by private insurers, 13% by Medicaid, 12% by Medicare, and 19% by self-pay. [Figures 5,6]

Figure 5. Inpatient Hospitalization Charges by Primary Payor - New Hampshire, 2001

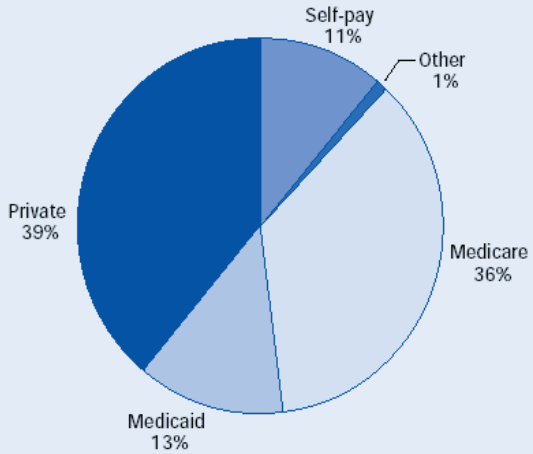
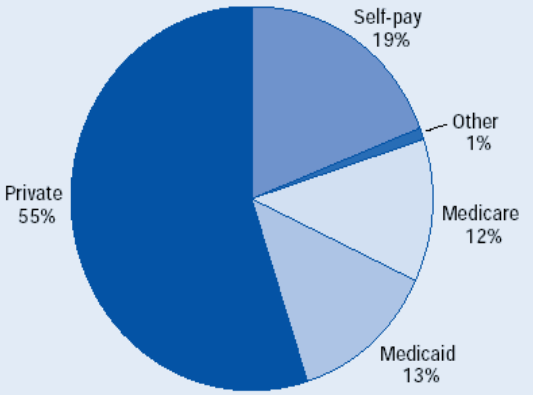


Figure 6. Emergency Department Charges by Primary Payor - New Hampshire, 2001



Indirect costs of asthma include non-medical economic losses such as days missed from school or work, caregiver costs, and reduced quality of life due to illness and disability. According to 2002 BRFSS data, New Hampshire adults with asthma reported more days of poor health and activity limitation than adults with no asthma. Approximately 25% of adults with asthma said they suffered asthma symptoms more than twice a week during the preceding 30 days and 19% reported days in the past year when they were unable to work or carry out their usual activities because of their asthma.

New Hampshire Focus Group Findings

Findings from focus groups held around the state during the period May-December 2003 give a more personal picture of the burden and impact of asthma in New Hampshire and speak directly to the observation made by the CDC's director that much of our understanding about asthma is not being applied in a consistent way.

There was general consensus among the people who attended the focus groups that asthma is a concern in New Hampshire communities not only because more adults and children appear to have it than in the past, but more importantly because people with asthma, their families, co-workers, school personnel, and the general public recognize neither the symptoms of the disease nor its seriousness when treated improperly or left untreated.

There was also strong agreement that expectations for functional health status and quality of life are lower than they should be given the evidence. It was widely felt that people with asthma and the public associate the disease with illness and seem prepared to settle for a variable and unpredictable chronic condition that limits everyday activities and can not be effectively controlled.

> "Most people with asthma – their expectations are still too low. They don't expect to feel well and don't expect to be fully active. Yet with appropriate treatment, then can be well, stay healthy, and lead physically active lives."
> -Physician

"School is compulsory. We require kids to spend the better part of their day in school buildings but don't require those buildings to be 'asthma-healthy'. How many schools have air quality problems?"

-School Administrator

Observations about the health care system mirrored many of those made by the advisory council subcommittees in their analysis of state trends and resources:

- Access to care is an increasingly important factor. People who are uninsured or under-insured experience difficulty accessing care and purchasing medications and supplies they need to manage the disease. Access issues are further complicated by the uneven distribution of health care and support services in the state.
- Adherence to the NAEPP Guidelines is inconsistent. Many people with asthma go undiagnosed and/or under-treated, the asthma care management plan is under-used, education and communication between providers and patients is inconsistent, and neither adults nor children receive the recommended follow-up visits needed to accurately diagnose and manage their asthma. Health care providers who are trained and reimbursed to treat acute illness need to also follow chronic disease management models which emphasize patient education and self-management.
- Compliance is an issue for both providers and patients. Provider compliance can improve in the following areas: adherence to national guidelines, diagnosis of asthma in a timely manner, development of an asthma care management plan with patients, follow-up to evaluate care plans, and effective communication. Family and patient compliance can also improve: appearance at follow-up visits, correct and consistent use of medications, avoidance of triggers, adherence to care plans even when feeling well, and effective communication.

Focus group findings also underscore the role of the environment in asthma control:

- Many community institutions tolerate conditions, such as poor indoor air quality, that may cause or exacerbate asthma symptoms.
- Indoor and outdoor air pollutants, poor ventilation, and secondhand smoke all adversely affect the air quality in homes, schools, and workplaces.
- Individuals and communities can take steps to control allergens and triggers to improve air quality. Examples of such measures include the creation of smoke-free homes, schools, workplaces, restaurants, and other public spaces; the use of cigarette taxes to discourage smoking; compliance with basic school building and maintenance standards; and implementation of school bus emissions control and anti-idling initiatives.

IV. The New Hampshire Asthma Plan

As mentioned in the Executive Summary, the New Hampshire Asthma Plan is meant to provide guidance on how to effectively address the challenge presented by asthma in New Hampshire. The primary goal is to improve the health status and quality of life of people with asthma. A companion goal is to develop the capacity in New Hampshire to do this. It is anticipated that the plan will be used to bridge the gap between knowledge and practice to effectively control asthma.

The plan is organized around four subject areas: Clinical Services and Disease Management, Indoor and Outdoor Environments, Public Awareness, and Asthma Surveillance. The planning process that the New Hampshire Asthma Advisory Council and its subcommittees engaged in took into account national, regional, and state priorities and objectives found in Healthy People 2010, Healthy New Hampshire 2010, and planning documents of the New England Public Health/Managed Care Collaborative and the Asthma Regional Council. The process also explored resources currently available in the state, identified priority areas for action, and considered "best practices" and how to most effectively address the priorities they had identified. The plan establishes objectives to work toward in each of the four areas and recommends strategies, or action steps, to achieve these objectives. A portfolio of monitoring and evaluation measures to assess progress is available from the Asthma Control Program on request.

"I've seen the continuity of care between the doctor's office, home, and school really improve when a child has an asthma management plan."
-School Nurse

The New Hampshire Asthma Plan rests on three assumptions regarding asthma control that appear earlier in this document:

- Though the specific causes of asthma are still not known, people with a family history of asthma are known to be more susceptible to developing asthma, and allergies, illness, and environmental exposures can all be important contributors to asthma attacks and increased asthma symptoms.
- While there is no known cure for asthma, it can be successfully controlled by following a medical management plan and avoiding environmental exposures.
- People with asthma can be symptom free and lead healthy, active lives.

Education, advocacy, health insurance benefits, health care reimbursement, and the needs of schools and workplaces emerged as important areas to address in the plan. The advisory council opted to integrate these concerns into the four core areas rather than address them as separate issues.

A. Clinical Services and Disease Management

Prior to making recommendations for the asthma plan, the Clinical Services and Disease Management subcommittee assessed how well the goals of asthma care are being met in New Hampshire and whether the infrastructure and resources in the state are comprehensive enough to meet them.

In the 1990s, the National Institutes of Health established the following goals for asthma care and management:[6]

- Prevent chronic symptoms
- Maintain (near) "normal" pulmonary function
- Maintain normal activity levels
- Prevent recurrent exacerbations of asthma and minimize the need for emergency department visits or hospitalizations
- Provide optimal pharmacotherapy with minimal or no adverse side effects
- Meet patients' and families' expectations of and satisfaction with care

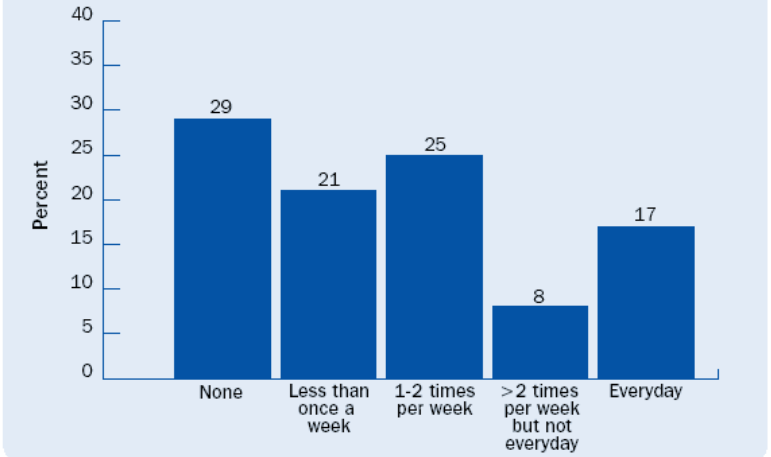
Questions about the level of asthma control among adults were included in the New Hampshire Behavioral Risk Factor Surveillance System (BRFSS) survey for the first time in 2002. The resulting information, entirely reliant on self-reporting, gives some sense of how close the care and management of adult asthma in New Hampshire comes to meeting National Asthma Education and Prevention Program goals. Unfortunately, similar data are not available at this time for children.

"There is so much information out there when you have allergies and asthma. You're told: 'Do This, Do That. Don't do this, Don't do that.' And then they tell you to get rid of the dog! I can't do it!"

-Parent and Patient

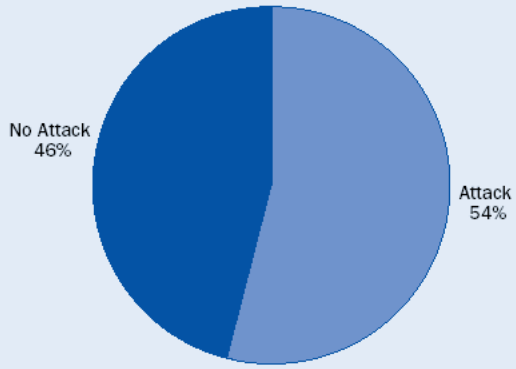
- In 2002, 29% of New Hampshire adults with asthma said they did not experience any asthma symptoms in the past 30 days; 50% said they experienced symptoms at least once a week. [Figure 7]

Figure 7. Asthma Symptoms in Past 30 Days - New Hampshire, 2002



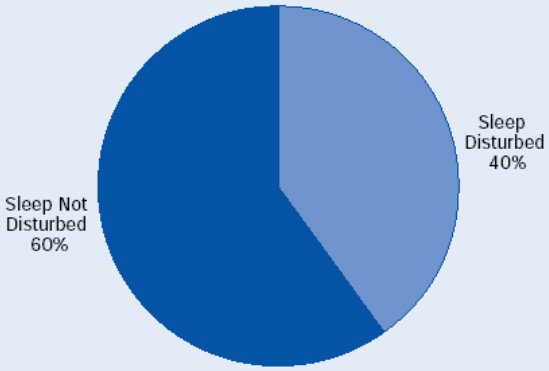
- 54% of New Hampshire adults with asthma said they had at least one asthma attack in the past 12 months. [Figure 8]

Figure 8. Asthma Attacks in the Past Year - New Hampshire, 2002



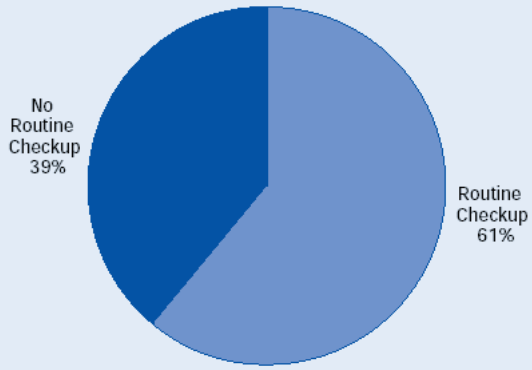
- 40% of New Hampshire adults with asthma said they had difficulty sleeping at least once in the past 30 days due to asthma symptoms. [Figure 9]

Figure 9. Difficulty Sleeping in Past 30 days Due to Asthma - New Hampshire, 2002



- 39% of New Hampshire adults with asthma reported they did not have a routine asthma checkup in the past 12 months. [Figure 10]

Figure 10. Routine Asthma Checkups in Past Year - New Hampshire, 2002



- Adults with asthma were more likely to say their health was fair or poor than people with no asthma. Approximately 22% of adults with asthma said their health was fair or poor, compared with 11% of adults who did not have asthma.
- 19% of New Hampshire adults with asthma reported having had days when they were unable to work or carry out their usual activities because of asthma.
- 70% of New Hampshire adults with asthma said they had no urgent doctor visits, and 81% reported no emergency department visits for asthma in the past 12 months.

Many excellent resources for asthma care and management currently exist in the state, including: strong hospital pulmonary rehabilitation departments, the availability of allergists and other specialists for referrals, a growing number of asthma educators, the existence of strong health plan case management programs, a healthy school nurse-to-student ratio in the schools, and a wide variety of outreach and education programs supported by the American Lung Association of New Hampshire and other groups.

The subcommittee identified the following areas in need of improvement, to be addressed in the asthma plan for New Hampshire:

- Distribution of primary care physicians, specialists, and asthma educators around the state, especially in the most northern counties
- Health care provider adherence to national guidelines for asthma care and management, including the use of an asthma care management plan for the physician's office, home, and school or other care settings
- Consistent use of standard asthma protocols in hospitals and emergency departments, to include specialty referral, asthma education, and patient follow-up
- Coordinated asthma management and communication between physician's office, home, and school or other care settings
- Coordination of covered services for health plans, including coverage of environmental interventions and reimbursement for asthma education
- Advocacy and support for individuals with asthma, their families, and health care providers

"I've seen people walk out of a doctor's office and walk away from the pharmacy, and they still don't know how to use an inhaler."
-Asthma Educator

Based on national best practices and current resources and needs in New Hampshire, the Clinical Services and Disease Management subcommittee articulated a set of statements to provide the conceptual framework for their recommendations:

- The National Asthma Education and Prevention Program Guidelines for the Diagnosis and Management of Asthma represent best practices and the standard of care for effective treatment and management of asthma today. Health care providers who follow the NAEPP Guidelines can diagnose, treat, and get asthma under control early. They can also start self-management education early and tailor it to the needs of the individual with asthma.
- The cornerstone of successful asthma management is an active partnership and good communication between the health care provider and the individual with asthma. Individuals who learn about their condition and understand both their symptoms and how to control them will have more success managing the disease and staying healthy.
- Everyone who has asthma should participate with their health care provider in developing an asthma care management plan that documents what actions they need to take to control their asthma symptoms every day and when they have a flare-up.
- Health plans and health care providers working together can improve access to "best practices."
- Physician practices can better manage the care of patients with asthma if they have access to data that describe patient outcomes and utilization of services.

"The value of our approach is in follow-up. We can work with patients on their asthma management plan, repeat information, demonstrate again and again, reassure, encourage – and figure out something that works for them."

-Physician

Clinical Services and Disease Management

Goal:

People in New Hampshire who are living with asthma will have access to a level of clinical care and coordinated management that will reduce the burden of disease by improving its control.

Objective 1: Increase the number of health care providers who adhere to the National Asthma Education and Prevention Program Guidelines for the Diagnosis and Management of Asthma.

Objective 2: Increase the number of people with asthma who have a current written asthma care management plan.

Objective 3: Increase the number of people who have the information and skills they need to successfully manage their asthma.

Objective 4: Reduce barriers to accessing care that are related to the geographic distribution of services and /or finances and insurance coverage.

Objective 5: Reduce pediatric and adult hospital admissions and emergency room visits.

Action Steps:

a) Convene a clinical working group composed of health care providers and others to: a.1) assess clinical services, coordination of care, and access to specialty and primary care; a.2) identify high-risk individuals or groups who will need focused interventions; and a.3) design, monitor, and evaluate pilot interventions.

b) Provide professional development and technical assistance to health care providers (including but not limited to clinicians, school nurses, pharmacists, visiting nurses, providers of durable medical equipment) to:

b.1) increase competency in the diagnosis, treatment, education, and management of asthma according to current NAEPP guidelines; and b.2) support changes in office practices when necessary.

c) Implement the use of electronic or paper critical pathways in emergency departments and outpatient settings to support the use of best practices and coordination along the continuum of care.

d) Implement the use of asthma care management plans for use by physicians, families, schools, and in other care settings.

e) Promote the certification and networking of asthma educators around the state.

f) Convene a case management working group composed of health care providers, public and private health plans, and pharmaceutical companies to create a plan and implementation schedule to: f.1) reimburse best practices as outlined by NAEPP Guidelines, including the use of critical pathways, education by certified asthma educators, and referrals for medically necessary treatment; f.2) distribute an asthma care management plan; f.3) provide educational resources for provider and family toolkits; f.4) provide affordable coverage for all medically necessary supplies, medications and environmental interventions; f.5) provide utilization data to working groups and providers for planning, monitoring, and evaluation purposes.

g) Provide surveillance information to clinical and case management working groups to plan, monitor, and evaluate interventions and progress.

h) Support mechanisms for families to access the information and support they need.

B. Indoor and Outdoor Environments

The role of environmental factors in the development and exacerbation of asthma has received increased attention over the last several years. The results of several research studies have linked exposure to secondhand smoke and indoor allergens, such as animal dander, mold, dust mites, and cockroaches, to the exacerbation of asthma in people who already have the disease.[7] In addition, other recent studies correlate exposure to outdoor air pollutants, such as ozone, sulfur dioxide, and diesel particulate matter, with increased occurrences of respiratory health problems including asthma.[8]

Nationally, the Environmental Protection Agency and the CDC National Center for Environmental Health are supporting and conducting asthma-related research. Regionally, both the Asthma Regional Council and the University of New Hampshire Climate Change Research Center have focused activities on learning more about air quality and health outcomes. In addition, the Lung Associations of Eastern Canada and New England have established the International Centre for Air Quality and Health to promote actions that reduce air pollutants that affect human health in New England and the Eastern Canadian air shed.

"If I had to choose one environmental factor to do something about, it would be smoking – reducing exposure to secondhand smoke would be top on my list."
-Physician

"I'm glad to see that our school buses have stopped idling in front of the school."
-School Nurse

A number of local and regional initiatives are currently investigating the relationships between environmental factors and asthma in New Hampshire:

- In 2000, the Manchester Health Department, in collaboration with the New Hampshire Department of Environmental Services (DES), designed and implemented a two-year pilot study to examine the relationship between indoor and outdoor air pollutant levels and the occurrence of asthma symptoms in children enrolled at an urban public elementary school.
- The NH Department of Health and Human Services, Division of Public Health Services, in cooperation with state and local environmental health stakeholders, has recently instituted an Environment and Public Health Tracking Initiative through a grant from the CDC. A primary focus of this initiative will be to link statewide health and environmental databases in an effort to investigate the impacts of indoor and outdoor air pollution on asthma.
- The Climate Change Research Center at the University of New Hampshire is conducting the Integrated Human Health and Air Quality Research Project (INHALE) at several sites in Maine, New Hampshire, and Vermont to study the relationship of weather, air pollution, and pulmonary function in the northeast.

Over time, these initiatives will add to our understanding of the relationships between environmental factors and asthma. Meanwhile, the recommendations made by the subcommittee on Indoor and Outdoor Environments take into account the resources and regulations already in place in New Hampshire and practices currently known to be effective. Underlying their recommendations is the principle that people and communities can create "asthma healthy" environments and minimize or eliminate common allergens in their homes, schools, workplaces, and public spaces.

Indoor and Outdoor Environments

Goal:

People in New Hampshire who are living with asthma will live, attend school, and work in asthma-healthy environments.

Objective 1: Increase the knowledge base of people associated with the design, building, repair, maintenance, and inspection of homes, schools, and workplaces to create an asthma-healthy environment, manage indoor air quality, and reduce exposure to environmental triggers.

Objective 2: Increase the availability of information and access to environmental interventions that people with asthma need to reduce or eliminate their exposure to indoor and outdoor allergens, irritants, and pollutants.

Objective 3: Increase the number of publicly assisted housing units, schools, workplaces, and public buildings that assess, monitor, and manage indoor air quality for an asthma-healthy environment.

Objective 4: Reduce the level and impact of environmental contaminants such as indoor allergens and ambient air pollution through low-cost and evidence-based interventions.

Action Steps:

a) Develop environmental/public health tracking systems by standardizing and linking data on health effects among persons with asthma and environmental factors such as air pollution and human exposure to environmental hazards.

b) Convene working groups to design, monitor, and evaluate pilot activities to achieve asthma-healthy environments for homes, schools, and workplaces.

c) Provide professional education and technical assistance to those involved with the design, building, repair, maintenance, and inspection of homes, schools, and workplaces to: b.1) raise awareness of the impact of environments that are not asthma-healthy; b.2) increase capacity and skills to monitor and manage indoor air quality and reduce exposures to asthma triggers and outdoor air pollutants; b.3) support policy and procedural changes if necessary.

d) Provide essential information regarding asthma-healthy indoor and outdoor environments and available resources through a variety of media.

e) Make standardized indoor air quality inspection, testing, and remediation tools available to indoor environmental professionals.

f) Promote the use of evidence-based interventions and educational resources that are available through national organizations.

g) Promote and support campaigns and activities to reduce active smoking and reduce or eliminate exposure to secondhand smoke, school bus idling, and diesel emissions.

h) Promote and support initiatives to investigate the relationships between air quality and respiratory health.

i) Develop a broad constituency of stake-holders to advocate for effective regulatory standards and policies that ensure asthma-healthy environments.

j) Enforce laws and regulations that protect health and ensure safety in order to prevent environmental conditions that may cause or exacerbate asthma.

C. Public Awareness

The need for objectives and action steps to promote greater public awareness of asthma grew out of all three advisory council subcommittees. There was a shared belief that people with asthma and the general public know less than they need to in order to successfully manage and control the disease. Findings from the focus groups held around the state and recommendations from the provider summit supported this.

The following observations describe the situation which the recommendations in this section seek to improve:

- People with asthma, their families, co-workers, school personnel, and the general public recognize neither the symptoms of the disease nor its seriousness when treated improperly or left untreated.
- Asthma is generally associated with illness and many people's expectations regarding health status are too low – they seem prepared to settle for a variable and unpredictable chronic condition that can't be effectively controlled and that disrupts and limits everyday activities.
- Educational materials and information regarding asthma are inconsistent.
- Change is possible but it depends on many things. People need information to act, but they also need motivation, sometimes incentives, often a helping hand. Sometimes they need to be persuaded to do the right thing. Invariably there are significant barriers.

"People don't think asthma is serious. Yet an attack can be fatal, and that fatal attack could have been prevented. We have to change people's perceptions about its seriousness."

-Asthma Educator

Public Awareness

Goal:

People and communities across New Hampshire will take steps in their homes, schools, workplaces, and public spaces to create asthma-healthy environments.

Objective 1: Increase awareness and understanding of asthma among the public, patients, and healthcare providers regarding prevalence and severity, indoor and outdoor environmental factors, measures for successful management and control, and expectations for health status and quality of life.

Objective 2: Increase advocacy and support for people with asthma to live healthy lives without limitations due to disease.

Objective 3: Reduce barriers to successful management and control of asthma in communities.

Action Steps:

a) Develop consistent messaging for all awareness, information, and education activities.

b) Launch a statewide public awareness campaign through a variety of media.

c) Provide education and technical assistance to schools, workplaces, adult and child care centers, and other community venues.

d) Develop initiatives for communities to identify barriers and take action to become asthma-healthy.

e) Make information available through a variety of media including a resource directory, website, and asthma hotline.

f) Work with media outlets to report on asthma events in a timely manner.

D. Asthma Surveillance

Public health surveillance is defined as the ongoing, systematic collection, analysis and interpretation of data for use in the planning, implementation, and evaluation of public health practice and programs. The purpose of New Hampshire's asthma surveillance system is to collect timely information on asthma and its associated risk factors in order to accurately characterize the disease, plan and manage programs, implement prevention and control measures, and assess the effectiveness of efforts undertaken.

Asthma surveillance should ideally address four important questions:[9]

- How much asthma is there and what are the trends over time?
- How severe is asthma in the population?
- How successful are we in managing asthma?
- What is the cost of asthma?

Several data sources are currently available to better understand the burden of asthma in New Hampshire: prevalence data from the Behavioral Risk Factor Surveillance System, emergency department and inpatient hospital discharge data, and vital records data.

The following are recommendations for improving the collection, analysis, and dissemination of asthma data.

"So much asthma goes undiagnosed, not just in children, but in adults as well. And we don't know how much asthma may be work-related."

-Physician

Asthma Surveillance

Goal:

The health care community and people of New Hampshire will have timely access to accurate information that will increase their understanding of asthma in New Hampshire and enhance their ability to address it effectively.

Objective 1: Increase the capacity of the asthma surveillance system to routinely access and analyze data needed for tracking asthma, program planning, decision-making, implementation, and evaluation.

Objective 2: Increase the timeliness and regularity of data reporting and feedback to all people who need to know.

Objective 3: Increase communication, cooperation, and data sharing/linking with statewide, regional, and national partners to create more comparable and useful asthma data.

Action Steps:

a) Prepare and disseminate an annual data report on asthma prevalence, emergency department visits, hospitalizations, and deaths in New Hampshire: a.1) expand the report to incorporate new sources of data as they become available; a.2) prepare and disseminate data briefs on topics of interest to a range of audiences; a.3) present data at the smallest geographical area that is statistically valid and protects the privacy of affected individuals.

b) Utilize common and consistent definitions for asthma and adhere to national surveillance recommendations from the Centers for Disease Control and Prevention and the Council of State and Territorial Epidemiologists (CSTE).

c) Develop relationships with relevant entities to obtain data on asthma prevalence, health services utilization, and medication use among residents covered by Medicaid, Medicare, and health maintenance organizations.

d) Estimate the direct and indirect costs of asthma in New Hampshire.

e) Expand sources for data on asthma prevalence, severity, and management in children.

f) Develop initiatives to collect information on health status and quality of life measures for asthma (e.g., symptom days, school and work absences).

g) Monitor known and potential risk factors for asthma onset, exacerbation, and severe outcomes.

h) Participate in statewide and regional data-sharing and data-linking initiatives.

i) Monitor progress toward meeting Healthy People 2010 and Healthy New Hampshire 2010 asthma-related objectives.

j) Monitor and evaluate the New Hampshire Asthma Plan and its implementation.

E. Monitoring and Evaluation

Monitoring and evaluation of the asthma plan and implementation activities will occur on several levels.

Process measures will be used to monitor implementation of plan recommendations, progress on work plans developed by various working groups to address recommendations, and short and medium-term outcomes of implementation activities. In the area of Clinical Services and Disease Management, for example, potential process measures for a clinical working group might include:

- working group convened with representatives from pediatrics, respiratory therapy, and asthma education
- working group subcommittee identified priorities for intervention, designed and implemented pilot activities to address priorities
- number of completed professional development events, number of participants, number of information packets distributed

Long-term outcomes, which have to do with actual changes in knowledge, behavior, and health outcomes, will be monitored and evaluated according to specific objectives and performance standard measures that working groups propose for pilot activities and interventions. A variety of available data sources and methods for gathering qualitative and quantitative information can be used.

In anticipation that working groups will need to design monitoring and evaluation components for their interventions, the program has prepared a portfolio of measures they can refer to for this purpose. Sources for these measures include: CDC Asthma Surveillance Indicators, Council of State and Territorial Epidemiologists Asthma Indicators, Healthy People 2010 Asthma Objectives, Healthy NH 2010 Asthma Objectives, Community Health Access Network (CHAN) Asthma Performance Indicators, NAEPP Recommendations on Key Clinical Activities for Quality Asthma Care, and the draft Joint Commission Disease-Specific Care Asthma Measures.

The monitoring and evaluation plan portfolio is available from the Asthma Control Program on request. Examples from the portfolio include:

- percent of asthma patients seen by provider who have an asthma care management plan
- number of people with asthma who report a decrease in activity limitations, or school or work days missed
- decrease in unplanned primary care provider visits for acute exacerbations of asthma
- decrease in emergency department visits due to asthma
- percentage of people with asthma who report no emergency department visits for asthma in the past 12 months

The original asthma objective for Healthy New Hampshire 2010 was "to reduce hospitalizations for pediatric asthma". A recommendation has been made to revise this objective to: "reduce pediatric and adult emergency room visits and hospitalizations for asthma." Pending approval, measures for the Healthy NH 2010 objective would be:

- number and rate of hospitalizations for children and adults with asthma as principal diagnosis
- number and rate of hospitalizations for children and adults with asthma as secondary diagnosis
- number and rate of emergency room visits for children and adults with asthma as a principal diagnosis
- number and rate of emergency room visits for children and adults with asthma as a secondary diagnosis

The New Hampshire Asthma Control Program will closely monitor the planning and implementation activities of working groups it convenes, and track other activities around the state that address plan recommendations. All program contracts will have an evaluation component to document progress made on short- and long-term objectives, and partners and others will be encouraged to refer to the evaluation plan portfolio and evaluate their activities using a selection of appropriate measures.

"Some workers may not have health insurance but may earn too much to be eligible for assistance. There are some people using the emergency room because they simply can't afford a doctor's visit or medication on a regular basis.

-Physician

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New Hampshire Asthma Plan

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